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REMARKS/ARGUMENTS

The Applicants have carefully reviewed the cited references and respectfully submit that the foregoing claims, as amended, are allowable. Therefore, a Notice of Allowance for Claims 1-15 and 21 is respectfully requested. The Applicants further attach hereto a marked-up version of the amendments made to the claims. The attached page is captioned "**VERSION WITH MARKINGS TO SHOW CHANGES MADE**".

Should it facilitate allowance of the Application, the Examiner is invited to telephone the undersigned Attorney of Record. The Commissioner is hereby authorized to charge any additional payment that may be due or credit any overpayment to Deposit Account No. 08-2395.

Respectfully submitted,
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Dated: July 10, 2002
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APPLICATION NO. 09/467,253



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

(1) Claim 1 has been amended as follows:

1. (Twice amended) A wire bonding method, comprising the steps of:
forming a semiconductor substrate with a copper (Cu) interconnect material;
fabricating a copper (Cu) bond pad from the interconnect material;
depositing a homogenous tantalum (Ta) layer onto the substrate and over the copper (Cu)
bond pad;
patterning and etching the tantalum (Ta) layer; and
bonding an aluminum (Al) wire to the tantalum (Ta) layer over the bond pad; and
wherein a portion of the tantalum (Ta) layer forms [a metallurgical] an intermetallic bond
with the copper (Cu) bond pad, and another portion of the tantalum (Ta) layer forms a tantalum
aluminide [(TaAl₃)] (TaAl₃) compound to intermetallically bond [with] the aluminum wire to the
tantalum (Ta) layer.

(2) Claim 10 has been amended as follows:

10. (Twice amended) A wire bonding method, comprising the steps of:
forming a bond pad made from an interconnect [material] metal on a semiconductor
substrate;
encapsulating said bond pad with a homogenous metal passivation layer;

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bonding a wire onto the metal passivation layer, the metal passivation layer including a metal different from the wire;

wherein a portion of the metal passivation layer forms [a metallurgical] an intermetallic bond with the interconnect [material] metal, and wherein another portion of the metal passivation layer forms a different intermetallic bond with the wire; and

wherein a mechanical and electrical connection is provided between the interconnect [material] metal and the wire, with the metal passivation layer disposed therebetween.